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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,237	10/09/2003	Toshiyuki Umeda	243224US2SRD DIV	8818
22850	7590	11/16/2004		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER WELLS, KENNETH B				
ART UNIT			PAPER NUMBER	
2816				

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/681,237	Applicant(s) UMEDA ET AL.	
	Examiner Kenneth B. Wells	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/950,625.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/24/03</u> <u>11/6/03</u> | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's election of species I (Fig. 16) is acknowledged. The traversal is not persuasive because, even though claims 1-3 currently read on the elected species, restriction to this embodiment is proper because the *application* contains many different patentable distinct inventions (i.e., species) and applicant is now limited to presenting claims to the elected embodiment. The restriction to species I is therefore final.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. The disclosure is objected to because of the following informalities: the first page of the specification should be amended so as to update the status of parent application no. 09/950,625 (now U.S. patent no. 6,768,379). Appropriate correction is required.

4. Claim 1 is objected to because of the following informalities: on line 14, "an additional differential amplifier" lacks clear antecedent basis because no previous differential amplifier has been recited. Also in claim 1, on

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line 15, the word --common-- should be inserted after "a" for clarity. Claim 3 is objected to because it cannot be determined if one input terminal and one output terminal are being recited on line 15, or if applicant means plural input terminals and plural output terminals. Appropriate correction is required.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Voorman.

Note Figs. 1 and 2, where the Fig. 2 circuitry is "for use in the arrangement shown in Fig. 1" (see column 4, lines 40-41). Fig. 1 of Voorman reads on the recited "mixer device"; the recited "first amplifier" (the differential amplifier in claims 2 and 3) is formed by BJTs T7 and T8; the recited "second amplifier" (the common emitter amplifier in claims 2 and 3) is formed by BJTs T5 and T6; also note that the input terminals 6 and 7 are common to both amplifiers, as are the output terminals 11 and 12; the "bias controller" of the claims reads on current

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source I3 and the "additional amplifier" reads on amplifier 1 (see Fig. 1 of Voorman). The recitation that the first and second amplifiers have hyperbolic tangent and exponential characteristics will be inherent in the operation of the first and second amplifiers of Voorman (because the structure of the disclosed and claimed amplifiers in applicant's invention is the same as that in Figs. 1 and 2 of Voorman).

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is (571)272-1757. The examiner can normally be reached on Monday through Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at (571)272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval

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(PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kenneth B. Wells
Primary Examiner
Art Unit 2816

November 12, 2004